

# APPARATUS AND METHOD OF MAPPING LOOK-UP TABLE IN AN IMAGING SYSTEM

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## ABSTRACT OF THE INVENTION

10 The present invention provides a mapping method and apparatus  
of look-up table in an imaging system. The mapping method  
implemented by the apparatus comprises receiving a digital signal  
having a high-bit portion and a low-bit portion. The high-bit portion of  
the digital signal is subjected to a curve table for look-up mapping to get  
a high-bit signal. The partial high-bit portion is subjected to a slope  
table for getting a factor. The low-bit portion of the digital signal is  
15 calculated with the factor to get a low-bit signal. The high-bit signal is  
combined with the low-bit signal to get an output signal. The curve  
table and slope curve can reduce the memory usage of the imaging  
system.

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